

JOURNAL SUPPLEMENT

Vol. 35, No. 9
SEPTEMBER 1956

INSTITUTION OF PRODUCTION ENGINEERS, 10, CHESTERFIELD ST., LONDON, W.

THE ANNUAL DINNER 1956

The Institution's Annual Dinner, 1956, will be held in the

DORCHESTER HOTEL, LONDON

on

FRIDAY, 5th OCTOBER, 1956

The Principal Guest will be The Rt. Hon. Iain Macleod, M.P.,
Minister of Labour and National Service.

Tickets, price £3. 3s. 0d. each (excluding wines) may be ordered on the form printed overleaf. Owing to limited accommodation it is not possible to have lady guests. Tickets are available for members and gentlemen guests. Table places will be allotted in strict order of application for tickets.

Please Note :

Last date for applications : Monday, September 24th.

No refunds for cancellations after Monday, October 1st.

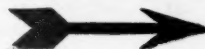
THE 1956 VISCOUNT NUFFIELD PAPER

The Council of the Institution are pleased to inform members that Dr. W. Grey Walter, of the Burden Neurological Institute, Bristol, has accepted the Institution's invitation to present the 1956 Viscount Nuffield Paper at the University of Bristol on Wednesday, 17th October next. The subject will be :

"THINKING MACHINES"

Admission to the meeting, which commences at 6.30 p.m., will be by ticket only, for which application should be made on the form overleaf. As accommodation in the lecture theatre is fairly limited, members and friends who are interested in hearing Dr. Grey Walter are advised to forward their applications without delay.

MATERIALS HANDLING CONVENTION (see page 5)



THE ANNUAL DINNER 1956

FROM <i>(Please use block letters)</i>	Date rec'd at I.Prod.E.
	Receipt sent:-
	Ticket(s) sent:-

**TO: THE SECRETARY, THE INSTITUTION OF PRODUCTION ENGINEERS,
10, CHESTERFIELD STREET, LONDON, W.1.**

Please send me a ticket for myself and.....tickets for my guests whose names are given below:-

Names of guests

Titles, Honours and Decorations :-

(additional names may be entered on separate slip).

If possible, I should like to sit at the same table as, or adjacent to, the following members:-

--

I enclose remittance for £ : : (.....ticket(s) at £3. 3s. 0d. each).

N.B.—Cheques, etc. should be crossed and made payable to the Institution of Production Engineers.

**TO: THE SECRETARY,
THE INSTITUTION OF PRODUCTION ENGINEERS,
10 CHESTERFIELD STREET,
LONDON, W.1.**

THE 1956 VISCOUNT NUFFIELD PAPER

Please send me, when available, tickets of admission and preprints of the Paper.

Block letters

NAME.....

PLEASE

ADDRESS.....

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HALIFAX GRADUATE WEEKEND SCHOOL

CRAIGLANDS HOTEL, ILKLEY.

29th/30th September, 1956.

PROGRAMME

Saturday, 29th September

- 2.00 p.m. Opening of the School by W. A. Hannaby, M.I.Prod.E., Chairman, Halifax Senior Section.
- 2.15 p.m. "The Use of Case Studies in Management Training." A lecture by Major Driscoll.
- 2.45 p.m.—
- 5.30 p.m. Case Study 1 — Machine Shop Control, Shop Loading and Human Relationships.
- 8.00 p.m.—
- 9.30 p.m. Case Study 2 — Plant Layout, Machine Installation and Human Relationships.

Sunday, 30th September

- 10.00 a.m.—
- 12.30 p.m. Case Study 3 — Stock Control and Order Progressing.
- 2.30 p.m. A Summing-Up by J. Taylor, A.M.I.Prod.E., Production Controller, The Holset Engineering Co. Ltd.

The fee for the School will be 55s. per person, which includes single room accommodation and meals from afternoon tea on Saturday to lunch on Sunday.

Applications should be forwarded as soon as possible to the address shown on the form overleaf.

The School will be open to non-members.

Members' ladies wishing to attend will be cordially welcomed and will be free to enjoy the amenities of the Craiglands Hotel and the delightful Wharfedale surroundings.

Members and their friends who find themselves unable to attend for all the sessions, should contact Mr. M. W. Alderdice, so that arrangements suitable to them can be agreed.

LONDON GRADUATE SECTION SEVENTH WEEKEND SCHOOL

The London Graduate Section of the Institution will hold their Seventh Weekend School on 21st/23rd September, 1956. As in past years, the School will be held at the Beatrice Webb House, near Dorking, Surrey. The theme of the School is "**Facets of Methods Engineering**" and the speakers will be:-

Mr. R. W. M. Maling, on "Management and its Application to Maintenance";

Mr. L. A. Darby, G.I.Mech.E., Grad.I.Prod.E., and Mr. B. B. Bowles, on "Comparison of Hydraulics and Pneumatics in Industrial Applications";

Mr. C. E. G. Bailey, on "Computers in Industry";

Mr. A. A. Howgrave, O.B.E., on "Packaging — The Final Stage of Production".

The Chairman of the School will be Mr. G. R. Blakely, London Senior Section Chairman.

Applicants may join the School at the times listed below. The charges shown include tea on Sunday.

From Friday evening, 21st September — Dinner 8 p.m. — Inclusive charge 42s.

From Saturday morning, 22nd September — Lunch 1 p.m. — Inclusive charge 32s. 6d.

From Saturday afternoon, 22nd September — Tea 4 p.m. — Inclusive charge 30s.

Should you book a place at the School and fail to attend, a cancellation fee of 6s. will be charged. The number of available places at the School is limited — so please fill in the application form at once.

HALIFAX GRADUATE SECTION ANNUAL WEEKEND SCHOOL, 1956

To: Mr. M. W. ALDERDICE, A.M.I.Prod.E.,
VAPALUX, LTD., QUEEN'S ROAD, HALIFAX.

I shall be attending the Halifax Graduate Section Weekend School in September and should be pleased if you would reserve accommodation for me. I shall be travelling by and will arrive at Craiglands Hotel at approximately a.m./p.m. Please find enclosed cheque made payable to M. W. Alderdice for £

Name Grade

Address

.....

.....

LONDON GRADUATE SECTION WEEKEND SCHOOL APPLICATION FORM

To: A. J. LAWRENCE, GRAD.I.Prod.E.,
7, THE MEADWAY,
CHELSFIELD, KENT.

Please include me in the Weekend School to be held on 21st/23rd September, 1956.

I shall arrive at approx.....a.m./p.m. on (date

Block letters NAME..... GRADE.....

PLEASE ADDRESS.....

All cheques, postal orders, etc., should be crossed and made payable to "The Institution of Production Engineers".

BETTER HANDLING - DO IT NOW!

MATERIALS HANDLING CONVENTION

LEAMINGTON SPA, 27th September - 29th September

The Materials Handling Sub-Committee of the Institution have arranged a 3-day Convention to be held at Leamington Spa from Thursday, 27th September, to Saturday, 29th September, 1956.

The programme includes visits to manufacturing companies in the Leamington, Coventry and Birmingham areas, who have introduced some significant development in materials handling during the last few years. Delegates have the opportunity of joining parties of between 20 and 30 to visit engineering and non-engineering companies, both large and small, and discussions will take place with the senior officials of these companies at the end of each visit (see details overleaf).

On Thursday evening the Mayor of Leamington will officially welcome delegates at the Town Hall, and will join them for dinner in the Assembly Room. The President of the Institution, Mr. E. W. Hancock, M.B.E., Hon.M.I.Prod.E., Director and General Manager of Humber Ltd., Coventry, will be the principal speaker.

The Paper on Friday afternoon will be presented by Mr. John Bright, of Joseph Lucas, Ltd., Birmingham, who will speak on:

"Materials Handling's Thorny Problems"

This will be followed by a discussion on the Paper. There will be a showing of films on materials handling on the same evening.

On Saturday morning there will be a general forum for materials handling problems, when a panel of leading executives from the companies on the visiting list will answer questions.

The Convention will close at 11.30 a.m. on Saturday morning.

Convention Fees: Members £5 5s. 0d.; Non-Members £6 6s. 0d.

Meetings, luncheon and dinner on Thursday and Friday, will be held in the Assembly Room at Leamington Town Hall, which has been placed at the disposal of the Convention organisers.

Application forms should be completed and returned as soon as possible to: The Secretary, 10 Chesterfield Street, London, W.1.

IMPORTANT

The total number of delegates who can be accommodated in the Town Hall at Leamington Spa is limited to 300. Applications will be dealt with in strict order of receipt and in any case cannot be accepted after **Wednesday, 19th September, 1956.**

It is equally essential that intending delegates who require hotel accommodation in Leamington should make their reservations as soon as possible, as there is likely to be some demand. All reservations should be made direct with the hotels concerned, a list of which appears at the end of this announcement.

CONVENTION APPLICATION FORM (3)

MATERIALS HANDLING CONVENTION, 1956 — LEAMINGTON SPA

Thursday, 27th September; Friday, 28th September; Saturday, 29th September

FOR OFFICIAL USE

NAME OF COMPANY

ADDRESS

NAME OF DELEGATE.	£5. 5s. 0d. Member	£6. 6s. 0d. Non Member.	Choice of Visits. Preference.			
			1.	2.	3.	4.
TOTAL No.	£ : : £ : :	Two Visits per delegate. Please indicate preference for four by code letter (see overleaf).				
Cheque enclosed £						

A panel has been included in the application form for your preference, i.e., the first four firms you wish to visit. As far as possible, the first two selections will be fulfilled.

MATERIALS HANDLING CONVENTION

PROGRAMME

Thursday, 27th September, 1956

Up to 12.00 noon	—	Delegates foregather at Hotels.
12.30 p.m.	—	Luncheon at Town Hall.
2.00 p.m.	—	Coaches depart for Factory Visits.
7.30 p.m.	—	Civic Reception in Town Hall.
8.00 p.m.	—	Dinner (lounge suits).

Friday, 28th September, 1956

8.45 a.m.	—	Coaches depart for Factory Visits.
1.30 p.m.	—	Luncheon at Town Hall.
3.00 p.m.	—	"Materials Handling's Thorny Problems". A Paper by John Bright, of Joseph Lucas, Ltd., Birmingham, followed by discussion.
4.30 p.m.	—	Discussion ends.
7.30 p.m.	—	Dinner (lounge suits) — followed by film show.

Saturday, 29th September, 1956

10.00 a.m.	—	Materials Handling Forum. The Panel Members will be leading industrialists engaged on Materials Handling in the companies visited by delegates.
11.30 a.m.	—	Convention ends.

LIST OF FIRMS

Available for visits on Thursday afternoon and/or Friday morning

(See application form on previous page.)

Code Letter	Firm	Nature of Production
A.	Associated Portland Cement Manufacturers Ltd.	Cement Manufacturers
B.	Birmingham Railway Carriage & Wagon Co. Ltd.	
C.	S. Bradford & Sons Ltd.	Bread Factory
D.	Cadbury Brothers Ltd., Bourneville.	Chocolate & Cocoa Manufacturers
E.	Courtaulds Limited, Coventry.	
F.	Evered & Co. Ltd.	Light Engineering and Assembly
G. (1)	Fisher & Ludlow, Ltd. (Factory Visit).	Mechanical Handling Equipment
G. (2)	Fisher & Ludlow, Ltd. (Conveyor Centre).	Mechanical Handling Equipment
H.	G.E.C., Coventry.	Electrical Components
I.	G.P.O., Birmingham.	
J.	M. Howlett & Co., Birmingham.	Light Engineering and Assembly
K.	Humber Ltd.	Motor Manufacturers
L.	Imperial Foundry Co.	
M.	Lockheed Hydraulic Brake Co. Ltd.	
N.	Joseph Lucas Ltd.	Electrical Accessories
O.	Northern Aluminium Company Ltd.	
P.	I.C.I., Ltd., Witton.	
Q.	Josiah Parkes, Ltd.	Manufacturers of Locks and Brassfoundry

MATERIALS HANDLING CONVENTION

HOTEL ACCOMMODATION

Delegates are asked to make their own reservations directly with the hotels, and it is important to note that bookings should be made as quickly as possible. Accommodation can be obtained at the hotels listed below :-

Clarendon, The Parade, Leamington Spa (Phone 2308).

Crown Hotel ***, A. A., R.A.C., High Street, Leamington Spa (Phone 1721).

Manor House Hotel, Avenue Road, Leamington Spa (Phone 1302).

Marlborough Hotel, Holly Walk, Leamington Spa (Phone 2757).

Oaks Hotel, R.A.C., Warwick Place, Leamington Spa (Phone 8869).

Regent Hotel ****, The Parade, Leamington Spa (Phone 2757).

Spa Hotel ***, A. A., R.A.C., Holly Walk, Leamington Spa (Phone 656.)

IMPORTANT

It is necessary to complete and return the official application form whether or not delegates are local residents.

SECTION MEETINGS

Visitors Tickets may be obtained from Section Honorary Secretaries.

SEPTEMBER, 1956

MIDLANDS REGION

Birmingham 7 p.m. September 19th
At the James Watt Memorial Institute, Great Charles Street, Birmingham.

Film Evening — 'Automation'. Admission by ticket only.

Coventry 7 p.m. September 17th
The Craven Arms, High Street, Coventry.

"Development of German Transfer Machines" — a film followed by a discussion led by Herr W. Weidmann (European Technical representative of Karl Huller, G.m.b.H.).

Coventry Graduate 7.15 p.m. September 4th

The Craven Arms, High Street, Coventry.

Film Evening.

Shrewsbury 6.30 p.m. September 13th
Works visit to Carpet Trades, Ltd., 5 Mill Street, Kidderminster.

Shrewsbury 7.30 p.m. September 26th
The Technical College, Shrewsbury.

"The Practical Application of Job Evaluation" by E. H. Collins.

Wolverhampton Graduate 7.30 p.m. September 19th

At the Wolverhampton and Staffs. Technical College, Wulfruna Street, Wolverhampton.

"High Speed Press Work" by J. A. Grainger, A.M.I.Mech.E., A.M.I.I.A., M.I.Prod.E.

NORTHERN REGION

Tees-Side 7 p.m. September 27th

The Imperial Hotel, Darlington.

"Valid Incentives" by E. C. Gordon England, M.I.Prod.E., F.I.I.A., F.R.Ae.S.

NORTHERN IRELAND REGION

Northern Ireland 7.30 p.m. September 27th

The Kensington Hotel, College Square East, Belfast.

Chairman's Address by J. G. Easterbrook, M.I.Prod.E. (followed by Social Evening).

NORTH MIDLANDS REGION

Nottingham 6 p.m. September 3rd
Works visit to Ruston & Hornsby Ltd., Lincoln.

NORTH WESTERN REGION

Manchester 7.15 p.m. September 17th
The Reynolds Hall of the Manchester College of Technology.

"C.O.₂ Process Applied to Core Making" by A. Talbot, M.I.B.F.

SCOTTISH REGION

Dundee 7.30 p.m. September 12th
The New Imperial Hotel, 15 Tally Street, Dundee.

"Materials Handling — with particular reference to Batch Production" by W. P. Kirkwood, B.Sc., M.I.Mech.E., M.I.Prod.E.

Edinburgh 7.30 p.m. September 12th
The North British Hotel, Princes Street, Edinburgh.
Ladies Night and Film Show.

SOUTHERN REGION

Oxford 7.30 p.m. September 25th
The Town Hall, Oxford.

"Industrial Finishing Technique and Practice (Paints and Organic Coatings)" by J. J. Stordy, B.Sc., and W. G. J. Appleton, A.M.I.Mech.E., M.Inst.E.

SOUTH EASTERN REGION

Luton Graduate 7.30 p.m. September 19th
The Mayor's Parlour, Court House, St. Albans, Herts.
"The Operation of an Oil Refinery" by C. R. Young
(illustrated by slides).

WELSH REGION

South Wales 7 p.m. September 28th
The Institute of Engineers, Park Place, Cardiff.
"Induction Heating" by Dr. R. H. Barfield, D.Sc., M.I.E.E.

1st-7th OCTOBER

NORTH MIDLANDS REGION

Nottingham 7 p.m. October 3rd
The Victoria Station Hotel, Milton Street, Nottingham.
"The Ings of Industry" by W. H. Telling, A.M.I.Prod.E.

SOUTHERN REGION

Reading 7.30 p.m. October 4th
The Great Western Hotel, Reading.
"The Production Engineer of the Future" by E. C. Gordon
England, M.I.Prod.E., F.I.I.A., F.R.Ae.S.

SOUTH EASTERN REGION

South Essex 7.30 p.m. October 3rd
The Mid-Essex Technical College, Chelmsford.
"Trade Unions and Industrial Development" by R. Harle.

MIDLANDS REGION

Coventry Graduate 7.15 p.m. October 3rd
The Craven Arms, High Street, Coventry.
"Production Panel" Panel members will include H. Eckersley, M.I.Prod.E. (Chairman), F. Cotton, M.I.Prod.E., H. J. Nixon, M.I.Prod.E., A. C. Swindle, M.I.Prod.E. and J. Wilson, M.I.Prod.E.

PRODUCTION APPOINTMENTS

BULLETIN No. 36
SEPTEMBER 1956

The last date for receiving material for insertion in the following month's bulletin is the 20th of each month. The fee for insertion of particulars regarding each appointment is £3 3s. (up to 100 words), and over 100 words £5 5s. A standard charge of £1 1s. per insertion is made to firms affiliated to the Institution, Technical Colleges, Universities and similar organisations.

Advertisers are advised that better response is likely if, in addition to essential qualifications, the following information is given:—

(a) Location of appointment; (b) Status in the organisation and scope of promotion; (c) Salary range and age range. Advertisers are asked to advise the Institution when appointments are filled. The Institution reserves the right to refuse or withdraw any announcement and also to make any alteration in the wording to ensure conformity with the Institution standards. Members interested in the following appointments should make application in accordance with the terms of notice. No correspondence can be undertaken by the Secretary other than the forwarding of replies to Box Nos.

All advertisements appearing in this Bulletin are subject to the Notification of Vacancies Order of 1952.

'Hollerith' Design and Development Engineers. The continuing expansion of the Company offers excellent opportunities for senior engineers who are interested in the development and design of high speed electro-mechanical punched card accounting machines. Qualifications looked for include a recognised degree, Higher National Certificate, or equivalent standard and previous shop and design experience, preferably in the electro-mechanical field. Facilities include pension fund, sick pay, and further education arrangements. Applications or enquiries should be addressed to: The Personnel Superintendent, (Ref.: PE/628), The British Tabulating Machine Co. Ltd., Icknield Way, Letchworth, Herts.

Assistant Chief Jig and Tool Draughtsman. Blackburn & General Aircraft, Ltd., Brough, E. Yorks, require an Assistant Chief for their Aircraft Tool Design Office. Applications are invited from suitably qualified men who have recent experience in the design of sub-assembly and assembly jigs and fixtures for modern high speed aircraft. The position presents an excellent opportunity for the man with the right experience. Good salary will be paid, with contributory Pension and Free Life Assurance benefits. Written applications, giving age, experience and qualifications in the first instance to: The Personnel Manager at the above address. Mark envelope—"Jig and Tool". Those applicants called for interview will have their travelling expenses refunded.

Engineers. Applications are invited from Engineers for work on research and development of automation techniques and production processes for the engineering industry. Previous experience not essential. Candidates should have an engineering or science degree, Higher National Certificate or equivalent qualification. Send full details including age, qualifications, experience and present salary in confidence to: Box No. 1413, I.Prod.E., 10 Chesterfield Street, London, W.1.

Graduate. Production Engineering Research Association requires Graduates (or equivalent) in engineering, physics and metallurgy for fundamental and practical research on

machining and forming of metals, friction and lubrication of machine slideways, vibration of machine tools, etc. Previous experience not essential; good prospects of advancement. Status and commencing salary will depend on age, qualifications and experience. Superannuation under F.S.S.U. Applications welcomed from graduates completing National Service this year. Send full details to: R.316, P.E.R.A., Melton Mowbray, Leics.

Work Study Engineers. Progressive Company requires experienced personnel for all aspects of Work Study. Work offers many interesting problems due to diverse products of the Company. Salary in accordance with experience. Posts pensionable. Offers considerable scope for further advancement. Five-day week. Applications giving age, experience and present salary to: Personnel Manager, The Telegraph Construction & Maintenance Co. Ltd., Telcon Works, Greenwich, S.E.10.

Tool and Die Designer required with extensive experience of hot brass pressing or steel forging dies, to develop customer service for tooling on the wide range of power presses and associated equipment which we manufacture. Write giving full details to: Chief Engineer, Wilkins & Mitchell Ltd., Darlaston, Staffs.

Work Study Engineer. A large Scottish firm has a vacancy for a Work Study Engineer. The Work Study Department of the organisation is being enlarged to deal with an increasing amount of work, and offers considerable scope for rapid advancement. Only qualified engineers with several years of work study experience should apply. The Company provides the normal personnel facilities, including Superannuation Scheme and will offer competitive salaries to a man with the suitable qualifications. Applications, giving full details and salary expected, to: Box No. 1421, I.Prod.E., 10 Chesterfield Street, London, W.1.

Development Engineer required to take charge of test house and physical and chemical laboratory of a rapidly expanding company manufacturing synthetic rubber oilseals and mouldings. Applicants should be of at least Higher

National Certificate engineering grade and an interest in chemistry would be an advantage. An energetic, enterprising man is required for this important senior staff appointment. Write stating experience, age and salary required to: Pioneer Oilsealing & Moulding Co. Ltd. (A Division of J. H. Fenner & Co. Ltd.), Cottontree Works, Colne, Lancashire.

Method Study Engineer required for duties in the South Derbyshire and Leicestershire Area. Successful applicant required to act as leader of group responsible for the application of method study at collieries. Engineering or Science degree, Higher National Certificate or similar qualifications an advantage. Salary according to qualifications and experience, within the range £1,000-£1,400 per annum. Applications, giving details of age, education, qualifications and experience to: Area Staff Manager, National Coal Board, East Midlands Division, Area No. 7, Coleorton, Leicester, within fourteen days of the publication of this advertisement.

Production Engineer. An opportunity is offered to a qualified Production Engineer (European or Indian) to develop a Production Engineering Department in a large Electrical Equipment Works in India. Applicants should have full knowledge of, and good experience in, the production of light and medium electrical rotating plant, switchgear and transformers. A period of approx. 5 years in India is contemplated, and there will be opportunity of similar work in England or abroad thereafter. All passages paid. Attractive salary and excellent working conditions. Preliminary interviews will be in London. Applications in full detail stating age, education, training, experience, responsibilities and salaries received in strict confidence to: Box No. 1422, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Engineer required by factory in Essex with 150 employees producing metal boxes and caps, for work on tool development, with a view to taking charge of production. The applicant should be 35 years or more, and have a good technical background, with experience and knowledge of current practice in this industry. The appointment carries superannuation, life assurance, profits bonus, and a good commencing salary, with future prospects. Applications, giving full details of training, experience and salary required, should be addressed to: Box No. 1423, I.Prod.E., 10 Chesterfield Street, London, W.1.

Chief Planning Engineer required with previous experience of production planning. Must have full knowledge of work study and be able to supply Estimating Department with times for quotation purposes. Good opportunity and prospects for the right man. Applications giving details of experience, age and salary required to: Geo. Adlam & Sons, Ltd., Brewers' & General Engineers, Fishponds, Bristol.

Senior Design Engineer required for design of prototype plant with experience in design of mechanical equipment including hydraulic and pneumatic mechanisms, and capacity to undertake calculations associated with such tasks. Essential qualifications: theoretical knowledge equivalent to H.N.C.; apprenticeship in mechanical engineering; adequate experience enabling accurate decisions of cost, shape, manufacturing methods and appearance of equipment. Salary £800/£1,000 per annum. Apply: J. Horne, Personnel Officer, Glacier Metal Co. Ltd., Ealing Road, Alpert, Wembley, Middx.

Methods Engineer. Morphy-Richards Ltd., St. Mary Cray, Kent, require a qualified mechanical and/or electrical Engineer age 30/35 experienced in plant and methods layouts for machine and assembly shops. Sound knowledge of motion study essential. Commencing salary depending upon experience and qualification, £750-£850. **Time and Motion Study Engineer** required, 21/30 years of age with sound engineering training, O.N.C. or equivalent and at least 3 years direct time and motion study experience—preferably in flow production assembly. Commencing salary range as above. **Engineering Designer** for Products

Development Department. Well qualified design draughtsman age 30/45 whose experience is mainly with light electro mechanical appliances for flow production. Salary £800-£1,200 according to experience and qualification. **Production Engineer** age 30/35 to take charge of Production Drawing Office. Thorough knowledge of light electro mechanical engineering components design essential: H.N.C. or equivalent in production or mechanical engineering desired. Previous administrative experience would be an advantage. Salary £800-£850. Each appointment offers full scope for progress in an expanding Company, a salary commensurate with responsibility, good working and recreational facilities, Profit Sharing and Pensions Schemes. Applications should be made in writing to: Personnel Manager, Morphy-Richards Ltd., St. Mary Cray, Orpington, Kent.

Office Manager. Smart & Brown (Machine Tools) Ltd., require Office Manager. Must be capable of dealing with home and export sales, quotations, correspondence, order department, advertising, etc. Directly responsible to Director. Apply: 25 Manchester Square, London, W.1.

Production Engineering Manager for unit of Glacier Metal Co. Limited, Europe's largest producer of plain bearings. Staff of 14; responsible for development work, estimating, tool design and maintenance, layout planning and time standards for shop on automatic high speed production of thin wall bearings. Most machines and processes are our own design including transfer lines, automatic tin plating, strip-lining and Unit P.E. will be expected to take part in further development, co-ordinating his, and his staff's, activities with other development engineers in the company. The person appointed will carry staff authority on engineering matters on behalf of the Unit Manager. The capacity to manage a group of subordinates is equally important with engineering ability. Commencing salary £1,000/£1,250 per annum. (Ref. No. 526) Personnel Officer, Glacier Metal Co. Ltd., Ealing Road, Wembley, Alpert, Middlesex.

Planning Engineer. An experienced planning engineer is required for repetitive production lines in medium sized factory. This is a congenial and well paid position for a man who is capable of building up and controlling detailed planning and loading system. Knowledge of woodworking industry preferred but not essential. Please write giving full details of previous experience, qualifications and salary required to: The Production Manager, H. Newsum, Sons & Co. Ltd., Carr Lane, Gainsborough, Lincs.

Production Executive. Applications are invited from men with sound production experience to take charge of inspection and packing in a large process plant. Candidates, aged preferably 32 to 40 years, must be accustomed to operations on a mass production scale, and be capable of controlling a complex range of end products and a labour force of approximately 500. This responsible appointment, which is with a well known organisation, will carry a starting salary of over £1,300 per annum, depending on experience, with opportunity for considerable progress. Box No. 1424, I.Prod.E., 10 Chesterfield Street, London, W.1.

Young Men. We are looking for young men to bring into our organisation—who are keen to become ultimately Senior Works Executives. The men required will be aged about 23, trained or being trained up to at least National Certificate level and who have served apprenticeships. This Company is engaged in the manufacture of domestic electrical appliances and the chosen applicants would need to commence as charge hands in assembly—machine—finishing shops. The appointments are based some 30 miles from London in the County of Surrey. Write in the first instance giving full details of past experience to: Works Manager, Box No. 1425, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Executive who will be directly responsible to the Board of Directors is required by Brookhirst Switch-

gear Limited, Chester. The Company invite applications from men with a successful record of forward production planning and with initiative and application which brings first class results. It is essential that applicants' practical training and experience should have been in the light engineering field with particular emphasis, during the last five years, on production and stock control of batch quantities. Technical qualifications which will enable a sound appreciation to be made of the relative importance of electrical specifications during manufacture are desirable. Salary fully commensurate with a senior position, will be arranged. Please apply, stating age (middle thirties are preferred) practical and technical training, personal particulars, etc., to: The Personnel Manager, Brookhirst Switchgear Limited, Northgate Works, Chester.

Production Engineer to take charge batch production in new Central London factory. H.N.C. or better. Experienced sheet metal and welded fabrication. Initiative and organising ability essential. State experience, age and salary required to: Box No. 1426, IProd.E., 10 Chesterfield Street, London, W.1.

Divisional Manager required by large electrical company for new machine tool control unit. Technical qualifications, commercial experience of the machine tool business and an appreciation of electronic applications essential. Minimum salary £2,000 per annum, plus. Box No. 1427, IProd.E., 10 Chesterfield Street, London, W.1.

Work Study Engineer required to lead small established work study group. Applicants should have good methods engineering and work analysis experience and a capacity to deal with people at all levels. Applications stating reference SPE 4 to: Personnel Officer (staff), Magnesium Elektron Limited, P.O. Box No. 6, Lumm's Lane, Clifton Junction, Swinton, Nr. Manchester.

Methods Engineer required by electronic engineering Company within 30 miles of London. Permanent, pensionable position. Commencing salary up to £1,200 per annum according to qualifications and experience. Apply: Box No. 1428, IProd.E., 10 Chesterfield Street, London, W.1.

Design Engineer. Applications are invited from mechanical engineers for a vacancy as Design Engineer with a small but rapidly expanding company. The company manufactures special purpose machinery and is a subsidiary of C. & J. Clark Limited, Shoemakers Street. Experience in the maintenance and operation of process machinery would be an advantage. Minimum qualifications H.N.C. Age range 28-40. Applications, stating age, experience, qualifications and salary required, which will be treated in confidence, should be addressed to: The Personnel Officer, C.I.C. Engineering Limited, Street, Somerset.

Planning Engineer. North British Locomotive Co. Ltd., Diesel Engine Division have a vacancy for a Planning Engineer. Interesting work, primarily process planning for the manufacture of engine components. Five day week, contributory pension scheme. Apply in writing, stating age and experience to: (I.G.) Personnel Manager, Springburn, Glasgow, N.1.

Assistant Works Manager. Management Selection Limited, have been retained to advise on the selection of the Assistant Works Manager for a company engaged on small batch production of a large variety of light pressings. Employees at this Works about 1,500. Works Manager is due to retire in a few years and promotion will be automatic for successful assistant. Candidates must have experience of production engineering in light engineering and be willing to study thoroughly the additional complications of this industry. Apprenticeship or engineering qualification an advantage. Age 30-35. Starting salary range, £1,250-£1,750. Applications with brief personal details should be sent to Management Selection Limited. No information will be passed to our clients without permission. Please write in confidence to: R. A. Denerley, Management Selection Limited (H.148), 8 Clarges Street, London, W.1.

Development Engineers. Glacier Metal Co. Ltd., Europe's largest producer of plain bearings is rapidly expanding into new processes and materials. One new area is the use of PTFE for oil-less bearings. Another is a new process of centrifugal filtration. A third is the development of our own machine tools for automatic, high speed production of bearings. Three new positions have been created in our central research organisation to deal with these areas. A fourth vacancy exists to replace one of our staff who has returned to his home abroad to join his family. **Senior Development Engineer (Filters)** (No. 41) to be outposted to subsidiary in Glasgow for work on applications and development of aluminium die-cast filter. Two subordinates. Responsible for own liaison with production and sales to achieve acceptable designs. **Development Engineer (P.T.F.E.)** (No. 496) for work in London laboratories and with customers on application of PTFE bearings. Emphasis is on new thinking to help customers apply this new material to their needs. As work expands the Development Engineer will be expected to select and train his staff. **Development Engineer (Machine Tool Design)** (No. 185) to work in London on studies of economic and engineering feasibility of machine tool designs. This approach takes into account cost aspects and current engineering practice to select best of alternative design possibilities. Development Engineer will have to, himself, bring further original ideas to meet the conditions established for a design. Close relations required with factory production engineers and machine tool designers. **Development Engineer (Bearing Design)** (No. 518) to work in London on evaluation of test rig results and production of design procedures; assist in defect investigations and advise customers on bearing design. **Senior Development Engineer** (Glasgow). Age 28-40; 1st or 2nd honours in engineering or physics; apprenticeship or similar practical experience; at least three years' experience in engineering development or research. Salary £1,200-£1,500. **Development Engineer.** Age 24-30 (completed National Service); 1st or 2nd honours in engineering; graduate apprenticeship or similar experience; salary £800-£1,000. Please specify position applied for. Personnel Manager, Glacier Metal Co. Ltd., Ealing Road, Alpertons, Wembley, Middlesex.

Planning Engineer. A small company of hydraulic engineers, approximately 40 employees, manufacturing well known pumps, situated W. London boundary, requires a first-class man with sound practical experience and thorough technical knowledge of modern production methods. He must have full confidence in his own ability and qualifications to prepare operation layouts and shop loadings to meet delivery schedules. Apply to: Box No. 1429, IProd.E., 10 Chesterfield Street, London, W.1.

Senior Production Cost Engineer required for a new appointment in large engineering company in West London area manufacturing precision electro-mechanical instruments. Duties comprise control of manufacturing costs, introducing modern techniques where applicable. Several years experience in this field required, including wide practical knowledge of work study, rate-fixing, estimating, and application of incentive schemes. An engineering background essential, coupled with maturity of judgment. Substantial salary will be paid commensurate with the responsibilities of the post. Applicants aged 38-50 should write fully to: Box A.C.21907, Samson Clark & Co. Ltd., 57-61 Mortimer Street, London, W.1.

Methods Engineer, preferably 35-45 years old, to revise present piecework system and later take sole charge of production planning including jig and tool design and control of rate-fixing. Motor Rail Limited, Simplex Works, Bedford.

Works Director required by medium-sized engineering company in Birmingham engaged on machining and pressing small non-ferrous equipment. Applications invited from competent works executives, not over 45, with proved management experience. Salary range—approximately £2,000 per annum, plus bonus on profits according to

experience. State in confidence full details, including qualifications, training, experience and remuneration. Box No. 1430, I.Prod.E., 10 Chesterfield Street, London, W.1.

Technician required by engineering company in S.E. London for developing manufacture of cold headed rivets in light alloys. Should have had experience of cold-heading machines and/or toolroom and be capable of extending his activities to the commercial field. Technical education to H.N.C. level an advantage. Salary £750 per annum. Apply: Box No. 1431, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Manager required for London factory. Applicants must have approved experience in electrical engineering including electronic techniques and preferably some knowledge of plastics. A man of initiative, ability, and energy required, able to plan production, to direct maintenance, handle workers with tact and should also have had some administrative experience. Age preferably 30/45 years. Salary £800/£1,000 according to ability and experience. Applications giving details should be directed to: Box No. 1432, I.Prod.E., 10 Chesterfield Street, London, W.1.

EDUCATIONAL APPOINTMENTS

City of Bath Technical College, Lower Borough Walls, Bath. Mechanical Engineer. Applications are invited for an appointment as Assistant (Grade B) to teach mechanical engineering subjects to Ordinary National Certificate and Final City and Guilds Machine Shop Engineering standard. Salary: Burnham (Technical) Scale—from October 1st probably £650—£1,025, with additions of up to £175 for degree and training. The starting point will depend on previous experience. Further particulars and form of application obtainable from: The Principal, Lower Borough Walls, Bath.

Hackney Technical College, Dalston Lane, E.8. Assistant Grade B. Temporary Assistant Grade B to teach mechanical engineering subjects to Final City and Guilds Machine Shop Engineering. Should be suitably qualified, with good apprenticeship and experience, preference to one offering machine tools and metrology. Burnham F.E. salary scale, £650 × £25—£1,025, plus London allowance, together with graduate and training additions where

applicable. Increments on minimum for approved industrial experience. Application forms from: Secretary at College, Dalston Lane, E.8 (to be returned by 8th September, 1956). (1520.)

The Polytechnic, 309 Regent Street, London, W.1. Department of Management Studies. Applications are invited for a full-time post as Lecturer in Management Studies, with special reference to work study and factory management, duties to commence as soon as possible. The work will include establishing contacts with firms and arranging projects for advanced students. Undertaking of research and consultative work will be encouraged. Teaching experience is desirable. Salary proposed by the Burnham Committee from October 1st is £1,200 to £1,350 per annum, plus London allowance of £36 or £48. A form of application may be obtained by sending a stamped addressed foolscap envelope to: Mr. J. C. Jones, Director of Education.

County Technical College, Stafford. Applications are invited for the following appointments to commence as soon as possible. (1) **Lecturer** to develop the subject of design of manufacture in connection with the Higher National Diploma sandwich course in mechanical engineering. Candidates should be suitably qualified and have industrial experience in this field. (2) **Assistant Grade B** to teach physics up to G.C.E. advanced level and chemistry to ordinary level or vice versa, together with some elementary mathematics. (3) **Assistant Grade A** (man or woman) to teach English to commercial and engineering students. Ability to undertake some teaching of other subjects at elementary level would be an advantage. Salaries for the above posts are according to the Burnham Scales for technical teachers which are expected to be as follows from October 1st, 1956: Lecturer £1,200 × £30—£1,350; Assistant Grade B £650 × £25—£1,025; Assistant Grade A £475 × £25—£900 for men, £430 × £20—£720 for women, plus equal pay increment. To Assistants Grade A and B scales allowances are made for degree, training and experience. Forms of application and further particulars may be obtained from the undersigned on receipt of a stamped addressed foolscap envelope. Applicants are requested to state for which post forms are required. Completed forms must be returned by September 24th, 1956. Director of Education, Dept. F.E., County Education Office, Stafford.

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DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

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